

Remarks

Applicant respectfully requests that this Amendment After Final Action be admitted under 37 C.F.R. § 1.116.

Applicant submits that this Amendment presents claims in better form for consideration on appeal. Furthermore, applicant believes that consideration of this Amendment could lead to favorable action that would remove one or more issues for appeal.

Claims 1 and 26 have been amended. Support for the amendments can be found in Figure 2 and the corresponding description in the specification at page 4, line 10 – page 5, line 27. No claims have been canceled. Therefore, claims 1-9, 26 and 27 are presented for examination.

Claims 1-3, 7-9 and 26-27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Alastalo et al., U.S. Publication No. 2001/0047424 (“Alastalo”) in view of Raghothaman et al., U.S. Publication No. 2005/0111376 (“Raghothaman”). Applicant submits that the present claims are patentable over Alastalo in view of Raghothaman.

Alastalo discloses a method for arranging communication between terminals (MT1-MT4) and an access point (AP1, AP2) in a communication system (1) applying data transmission frames (FR). The data frames (FR) comprise at least uplink time slots (UL) for performing data transmission from the terminals (MT1-MT4) to the access point (AP1, AP2), and downlink time slots (DL) for performing data transmission from the access point (AP1, AP2) to the terminals (MT1-MT4) via a wireless communication channel. In the method, the terminals (MT1-MT4) can be allocated one or more time slots (702-707, 802-807) of said frames. In the method, the spatial signature of at least said two terminals (MT1-MT4) is determined, and in at least part of said frames (FR), at least partly simultaneous time slots

(704-707, 802-804) are allocated to at least two terminals (MT1-MT4). In the method, measurements are also taken to estimate the timing and frequency offsets and the properties of the communication channel, which measurements are taken at least partly on the basis of a signal transmitted by the terminal (MT1) to the access point (AP1, AP2), wherein the results of said measurements are used to select the terminals (MT1-MT4) to which simultaneous time slots (702-707, 802-807) are to be allocated. During said measurements, the other terminals (MT1-MT4) communicating with the access point (AP1, AP2) do not transmit a signal to said access point (AP1, AP2). See Alastalo at Abstract.

Raghothaman discloses a method for transmitting a packet of N input bits including encoding all of the N bits as a single entity, such as with an interleaver of length N within a turbo coder, outputting M encoded bits, channel interleaving the M bits, splitting the M encoded bits into a parallel first and second portion, and transmitting them over separate channels to achieve spatial diversity. The size of the first and second portion is determined based on a closed feedback loop that provides some knowledge of the channel, preferably a measure of channel capacity. The feedback loop may also provide channel knowledge to a subpacket selector associated with each transmit antenna, which determines an appropriate rate for that channel and selects subpackets to fill a transmission packet for that channel. The subpacket selectors choose a subpacket of systematic bits and fill the remaining transmission packet size with subpackets of parity bits. Eigenvectors may be employed to transmit each transmission packet over more than one channel with a power disparity between the channels. See Raghothaman at Abstract.

Claim 1 of the present application recites:

A device, comprising:

a scheduler in an access point to provide a schedule of packets to transmit on each of M spatial channels to M stations during a time interval by arranging variable length packets to fill each of the M spatial channels based on packet lengths of the variable length packets having aggregate transmission times that fit within the time interval,

where M is a constant less than or equal to a number of antennas at the access point.

Applicant submits that neither Alastalo nor Raghethaman disclose or suggest a process of arranging variable length packets to fill each of M spatial channels based on packet lengths of variable length packets having aggregate transmission times that fit within a time interval. Particularly, Alastalo explicitly discloses using packet length as a criterion for selecting terminals to be served simultaneously. See Alastalo at paragraph [0058]. However, *using packet length as a criterion for selecting terminals to be served simultaneously* is not equivalent to arranging variable length packets based on packet lengths of variable length packets having aggregate transmission times that fit within a time interval.

Since Alastalo and Raghethaman each fail to disclose or suggest a scheduler in an access point arranging variable length packets to fill each of M spatial channels based on packet lengths of variable length packets having aggregate transmission times that fit within a time interval, any combination of Alastalo and Raghethaman would fail to disclose or suggest such a process. As a result, the present claims are patentable over Alastalo in view of Raghethaman.

Independent claim 26 includes limitations similar to those discussed above with regard to claim 1. Thus, claim 26 and its dependent claims are also patentable over Alastalo in view of Raghethaman.

Claims 5-6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Alastalo in view of Raghothaman and further in view of Niwano, U.S. Publication No. 2007/0081498 ("Niwano"). Applicant submits that the present claims are patentable over any combination of Alastalo, Raghothaman and Niwano since none of the references disclose or suggest a scheduler in an access point arranging variable length packets to fill each of M spatial channels based on packet lengths of variable length packets having aggregate transmission times that fit within a time interval.

Applicant submits that the rejections have been overcome, and that the claims are in condition for allowance. Accordingly, applicant respectfully requests the rejections be withdrawn and the claims be allowed.

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,
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